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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/099,918	03/14/2002	John H. Oates	102323-103	3586

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EXAMINER	
ODOM, CURTIS B	
ART UNIT	**PAPER NUMBER**
2611	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/099,918	OATES ET AL.	
	Examiner	Art Unit	
	Curtis B. Odom	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-10 and 12-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-10 and 12-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 3-10, and 12-16 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claims 1, 3-10, and 12-16 are objected to because of the following informalities: Claims 1 and 10 recite the limitation "a protocol translator coupled to the first and second processes and translating communications in between". However, the processes correspond to a set of communication tasks, and thus cannot perform communication with each other or other components of the system or monitor the operational status of a component of the system. It is the operating systems which performs these functions. Therefore, it is suggested by the Examiner that the limitation be changed to "a protocol translator coupled to the first and second operating system and translating communication in between". Thus, any communications between the first and second processes recited in the claims is suggested to be changed to communications between the first and second operating systems since the processes cannot communicate with one another (see also claims 4, 5, 7, 13, 14, 15, and 16)
Appropriate correction is required.

3. Claim 8 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The limitations of claim 8 are recited in the claim in which it depends upon (claim 1).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over McBurney et al. (previously cited in Office Action 10/17/2006) in view of Gaal et al. (U. S. Patent No. 6, 570, 530).

Regarding claim 1, McBurney et al. discloses a communication device (see Fig. 2) or detecting transmitted signals in pseudo random code spread spectrum waveforms (see column 5, lines 10-19) comprising:

a first operating system represented by a measurement platform (Fig. 2, block measurement platform) operating under a first operating system (column 7, lines 20-27) and executing a first set of communication tasks such as correlation (see column 5, lines 9-19) for detecting transmitted signals encoded in pseudo random waveforms,

a second operating system represented by a user platform (Fig. 2, user platform) operating under a second operating system (see column 7, lines 20-27) and executing a second set of communication tasks such as generating information pursuant to user specific applications (see column 4, lines 22-25) for detecting transmitted signals encoded in waveforms, where the first and second operating systems differ (see column 11, lines 18-19),

a protocol translator represented by a measurement data transfer (see Fig. 2) translator coupled to the first and second operating systems (procecesses) and translating intermediate measurement data communications in between (see column 4, lines 5-14),

the first operating system (measurement platform) sending to the second operating system (user platform) executable navigation solution (see column 7, lines 22-33) instructions (processes) for performing the communication tasks.

McBurney et al. does not specifically disclose the user platform (second operating system) generates a matrix as a result of executing instructions.

However, McBurney et al. further discloses the user platform (second operating system) performs processes such as determining GPS receiver position, velocity, and time. Gaal et al. further discloses generating a geometry matrix (see column 9, lines 31-67) for coarse and accurate estimation of a GPS receiver position. Gaal et al. further discloses the position estimates (matrix) can be generated by executing stored program instructions (see column 12, lines 59-63). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the second operating system (user platform) of McBurney et al. to determine the position of a GPS receiver as disclosed by Gaal et al. since Gaal et al. states the

disclosed position estimation technique provides a more accurate position estimation (see column 3, lines 56-67).

Regarding claim 5, McBurney et al. further discloses the first operating system (the measurement platform) sending to the second operating system (user platform) executable navigation solution processes to configure the user platform (see column 7, lines 22-33).

6. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over McBurney et al. (previously cited in Office Action 10/17/2006) in view of Gaal et al. (U. S. Patent No. 6, 570, 530) as applied to claim 5, and in further view of Crosetto (U. S. Patent No. 5, 590, 284).

Regarding claims 6-8, McBurney et al. discloses the first operating system (measurement platform) sending to the second operating system (user platform) executable navigation solution processes/instructions (see column 7, lines 22-33). McBurney et al. further discloses user platform (second operating system) routes results (such as a matrix disclosed by Gaal et al. above) to the measurement platform/first operating system (see column 7, lines 11-15). McBurney et al. and Gaal et al. do not disclose the measurement platform (first operating system) sends the user platform (second operating system) a routing map to route the instructions and the results.

However, Crosetto discloses a master processor monitoring the status of slave processors and distributing (configuring) tasks among the slave processors (see column 1, lines 28-39). The master processor disseminates commands (instructions) from the master processor to parallel slave processors (see column 2, lines 51-61). The commands include control commands to receive or route data in each processor to other processors (see column 3, lines 14-19). Therefore, it would have been obvious to one skilled in the art at the time the invention was

made to implement the master/slave processor McBurney et al. and Gaal et al. as disclosed by Crosetto since Crosetto states this implementation reduces processing and cost overhead (see column 3, lines 2-7).

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over McBurney et al. (previously cited in Office Action 10/17/2006) in view of Gaal et al. (U. S. Patent No. 6, 570, 530) in view of Crosetto (U. S. Patent No. 5, 590, 284) as applied to claim 8, and in further view of Gaus, Jr et al. (U. S. Patent No. 6, 885, 338).

Regarding claim 9, McBurney et al., Gaal et al., and Crosetto do not disclose the matrix represents a correlation of code sequences for user waveforms.

However, Gaus Jr. et al. further discloses computing portions of a covariance matrix simultaneously using partial correlation processors (see column 8, lines 25-30) in a GPS receiver, wherein the partial correlation processors perform correlations of input samples (code sequences) for the input (user) waveforms (see column 8, lines 46-54). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to calculate a covariance matrix of correlations in McBurney et al., Gaal et al., and Crosetto as disclosed by Gaus Jr. et al. since Gaus Jr et al. states the covariance matrix can be used to minimize the effects of interference signals (see column 3, line 51-column 4, line 65).

8. Claims 3, 4, 10, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over McBurney et al. (previously cited in Office Action 10/17/2006) in view of Gaal et al. (U. S. Patent No. 6, 570, 530) and in further view of Gaus, Jr et al. (U. S. Patent No. 6, 885, 338).

Regarding claim 3 (see rejection of claim 1), McBurney et al. and Gaal et al. do not disclose the matrix represents a correlation of code sequences for user waveforms.

However, Gaus Jr. et al. further discloses computing portions of a covariance matrix simultaneously using partial correlation processors (see column 8, lines 25-30) in a GPS receiver, wherein the partial correlation processors perform correlations of input samples (code sequences) for the input (user) waveforms (see column 8, lines 46-54). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to calculate a covariance matrix of correlations in McBurney et al. and Gaal et al. as disclosed by Gaus Jr. et al. since Gaus Jr et al. states the covariance matrix can be used to minimize the effects of interference signals (see column 3, line 51-column 4, line 65).

Regarding claim 4, McBurney et al. further discloses the user platform (second operating system) routes position (matrix) data to the measurement platform (first operating system) based on the configuration of the measurement platform to use this data to look for satellites (see column 7, lines 7-15).

Regarding claim 10, McBurney et al. discloses a communication device (see Fig. 2) or detecting transmitted signals in pseudo random code spread spectrum waveforms (see column 5, lines 10-19) comprising:

a first operating system represented by a measurement platform (Fig. 2, block measurement platform) operating under a first operating system (column 7, lines 20-27) and executing a first set of communication tasks such as correlation (see column 5, lines 9-19) for detecting transmitted signals encoded in pseudo random waveforms,

a second operating system represented by a user platform (Fig. 2, user platform) operating under a second operating system (see column 7, lines 20-27) and executing a second set of communication tasks using multiple processors (see column 7, lines 48-53) such as

generating information pursuant to user specific applications (see column 4, lines 22-25) for detecting transmitted signals encoded in waveforms, where the first and second operating systems differ (see column 11, lines 18-19),

a protocol translator represented by a measurement data transfer (see Fig. 2) translator coupled to the first and second operating systems (processes) and translating intermediate measurement data communications in between (see column 4, lines 5-14),

the first operating system (measurement platform) sending to the second operating system (user platform) executable navigation solution processes/instructions for performing user tasks (see column 7, lines 22-33).

McBurney et al. does not specifically disclose the processors of the second operating system generate a portion of a matrix as a result of executing instructions from the first operating system (measurement platform).

However, McBurney et al. further discloses the user platform performs processes such as determining GPS receiver position, velocity, and time. Gaal et al. further discloses generating a geometry matrix (see column 9, lines 31-67) for coarse and accurate estimation of a GPS receiver position. Gaal et al. further discloses the position estimates (matrix) can be generated by executing stored program instructions (see column 12, lines 59-63). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the second operating system (user platform) of McBurney et al. to determine the position of a GPS receiver as disclosed by Gaal et al. since Gaal et al. states the disclosed position estimation technique provides a more accurate position estimation (see column 3, lines 56-67).

Gaus Jr. et al. further discloses computing portions of a covariance matrix simultaneously using partial correlation processors (see column 8, lines 25-30). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to calculate the matrix of McBurney et al. and Gaal et al. as disclosed by Gaus Jr. et al. since Gaus Jr et al. states processing time for computing a matrix is reduced by computing portions of the matrix simultaneously using parallel processors (see column 8, lines 25-30).

Regarding claim 12, Gaus Jr. et al. further discloses computing portions of a covariance matrix simultaneously using partial correlation processors (see column 8, lines 25-30) in a GPS receiver, wherein the partial correlation processors perform correlations of input samples (code sequences) for the input (user) waveforms (see column 8, lines 46-54). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to calculate a covariance matrix of correlations in McBurney et al. and Gaal et al. as disclosed by Gaus Jr. et al. since Gaus Jr et al. states the covariance matrix can be used to minimize the effects of interference signals (see column 3, line 51-column 4, line 65).

Regarding claim 13, McBurney et al. further discloses the first operating system (measurement platform) sending to the second operating system (user platform) of multiple processors (see column 7, lines 50-53) executable navigation solution processes/instructions to configure the user platform/second operating system (see column 7, lines 22-33).

Regarding claim 14, McBurney et al. further discloses the second operating system (user platform) routes position data (such as matrices described by Gaal et al.) to the first operating system (measurement platform) based on the configuration of the measurement platform to use this data to look for satellites (see column 7, lines 7-15).

9. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over McBurney et al. (previously cited in Office Action 10/17/2006) in view of Gaal et al. (U. S. Patent No. 6, 570, 530) and in further view of Gaus, Jr et al. (U. S. Patent No. 6, 885, 338) as applied to claim 13, and in further view of Crosetto (U. S. Patent No. 5, 590, 284).

Regarding claims 15 and 16, McBurney et al., Gaal et al., and Gaus, Jr et al. do not disclose the measurement platform (first operating system) monitors the operational status of the user platform (second operating system) processors and generates information for communication or executable instructions thereon.

However, Crosetto discloses a master processor monitoring the status of slave processors and distributing (configuring) tasks among the slave processors (see column 1, lines 28-39). The master processor disseminates commands (instructions) from the master processor to parallel slave processors (see column 2, lines 51-61). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to implement the master/slave processor in McBurney et al., Gaal et al., and Gaus Jr et al. as disclosed by Crosetto since Crosetto states this implementation reduces processing and cost overhead (see column 3, lines 2-7).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 571-272-3046. The examiner can normally be reached on Monday- Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Curtis Odom
April 12, 2007

JAY K. PATEL
SUPERVISORY PATENT EXAMINER